

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND

SABEIN BURGESS,

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Plaintiff,

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v.

Civil Action No. RDB-15-cv-00834

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BALTIMORE POLICE DEPARTMENT,  
*et al.*,

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Defendants.

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**RESPONSE OF DEFENDANTS TO MOTION *IN LIMINE* NO. 11  
TO EXCLUDE OPINION TESTIMONY OF MICHAEL A. KNOX**

Defendants, Gerald Goldstein, William Ritz, Richard Purtell, Dale Weese, Steven Lehmann, Robert Patton, David Neverdon, Daniel Van Gelder, Dean Palmere, John Boyd, John Skinner, and Kelly Miles, collectively by their undersigned counsel, hereby file this Response to Plaintiff Sabein Burgess's Motion *In Limine* No. 11 to Exclude Opinion Testimony of Michael A. Knox, and state as follows:

**I. Introduction.**

In this suit, Mr. Burgess alleges that Daniel Van Gelder fabricated or misrepresented the Gunshot Residue (GSR) evidence contained in his report that was used to convict Mr. Burgess of Michelle Dyson's murder in 1995.<sup>1</sup> Specifically, Mr. Burgess asserts that Mr. Van Gelder's GSR Report inappropriately indicated that "most probably" Mr. Burgess's hands were immediately adjacent to a discharging firearm or were themselves used to fire a firearm within a few hours prior to the collection of GSR samples. Mr. Burgess also argues that Mr. Van Gelder is not

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<sup>1</sup> This Court has already concluded that there is no claim against Mr. Van Gelder for the content of his trial testimony. *See* ECF No.55 at 15, n.30, granting in part Defendants' Motion to Dismiss.

entitled to “qualified immunity for the ‘deliberate or reckless falsification’ of scientific evidence.” *See* ECF No. 195-1 at 136. In other words, Mr. Burgess must prove that Mr. Van Gelder’s presentation of the GSR evidence was clearly erroneous - illogical or implausible in light of the evidence - based upon 1995 scientific standards. Mr. Knox not refutes answers conclusion, but explains how Mr. Van Gelder’s methodology and reliance on analysis of GSR particle quantities was within the acceptable practice at the time of his report.

Defendant retained Michael A. Knox to evaluate the state of the science and standards available and applicable to GSR analysis in 1995, and he provided the opinion that Mr. Van Gelder “had a sufficient scientific basis for his conclusion given the state of science at the time, and the information he had at the time, and what he has stated he based his opinions on.” Exhibit A (Deposition of Michael Knox) at 163. In short, Mr. Knox’ opinion contradicts and undermines Plaintiff’s contention that Mr. Van Gelder’s opinions were so clearly erroneous and unsupported by science that they constituted fabrication. Mr. Knox’s opinion both addresses that particular issue and rebuts the opinions of the Mr. Burgess’s experts. *See* Exhibit A (Deposition of Michael Knox) at 162:24 to 163:6.

To be clear, Mr. Knox does not intend to offer an opinion “under current science as to whether or not Mr. Burgess was the shooter or was near the shot at the time it was shot” or whether under current science he can determine the possibility or probability of GSR transfer during the murder of Michelle Dyson. *Id.* at p. 162:19-23. As set forth below, Mr. Burgess has not presented any rational argument to refute that the specific opinions that Mr. Knox intends to offer are not based soundly on his specialized knowledge and expertise and will assist the trier of fact in this matter.

## II. Argument.

### A. **Mr. Knox's Opinions Are Based on his Specialized Knowledge of GSR and Are The Product of Reliable Principles and Methods .**

Mr. Burgess concedes that Mr. Knox has sufficient experience and knowledge to testify as an expert on GSR evidence. *See* ECF No. 227 at p.1. As Mr. Burgess acknowledged, Mr. Knox is highly credentialed. *See id.* 227 at 7; *see also* Exhibit B (Knox Forensic Analysis & Reconstruction Report). Mr. Knox's doctoral studies have focused heavily on qualitative and quantitative research methods, data analysis, and statistical methods, all of which he employed here in forming his opinions. Using his expertise, Mr. Knox conducted a review and analysis of the scientific literature and guidelines for GSR evidence in 1994 and 1995.

As he explains, the ability to conduct this kind of research is highly appropriate in this case and significantly distinguishes him both from Mr. Niemeyer and Mr. Kilty. First, as he notes, this case literature review is of primary importance because "we're looking back in time" to establish "the state of science" at some point in the past. *See* Exhibit A at 178-79. Unlike Mr. Niemeyer and Mr. Kilty, who have only an undergraduate education, scientific research is normally conducted and mastered at the graduate level. *Id.* at 174-75. Second, this case involves principles of crime scene reconstruction, which is not within the experience of a laboratory scientist. *Id.* at 175.

Mr. Knox noted that experts in this field often have differences of opinion, and the acceptable range of scientific opinion in this area was governed by certain standards that were normally be identified in the literature and other sources. *Id.* at 164-65. Experts, he notes, often question each other's science, but in most cases the disagreement comes down to "how they're applying it, how they're interpreting, and how their interpreting literature and data, and difference in experience." *Id.* at 165.

In developing his opinion about Mr. Van Gelder's approach, he evaluates the status of literature regarding particle transfer prior to 1995, and notes he found "no scientific literature" to support the conclusion that particle is more likely to stick to a second object, rather than the first object it reaches. *Id.* at 166. He explains that collection dabbers need an adhesive on the in order to collect and retain the particles. *Id.* at 167.

Furthermore, he addresses whether the quantity of unique GSR particles would have been an appropriate scientific fact to consider in forming an opinion regarding GSR in 1994. He notes that there was no scientific literature he located that suggested to any scientist in 1994 or 1995 that transfer could occur in other than a small number of particles. *Id.* at 168. He even notes how particle count alone was significant to the FBI and other agencies as they establish a simple cut off of particle counts for making a positive finding for GSR. *Id.*

Additionally, Mr. Knox notes that the reliance on empirical tests to develop particle counts to compare against data collected in a GSR test was the acceptable practice at the time. *Id.* at 184. Niemeyer and Kilty do not dispute this was the methodology typically employed, and Niemeyer himself used examples of conducting his analysis using that methodology. *See* Exhibit B (August 17, 2017 Rebuttal Report) at p. 4. Mr. Knox explains that Mr. Van Gelder's experience in other cases is also relevant to forming his empirical knowledge for comparison, and notes Mr. Van Gelder had completed between 200 and 300 prior GSR tests before the relating to Mr. Burgess. Exhibit A at 169. Mr. Knox further agreed that, based on his research and review of scientific literature and studies available in 1994, it would have been "entirely reasonable" for a scientist like Mr. Van Gelder to conclude, based on the number of unique GSR particles found in the test performed on Mr. Burgess, to find that transfer was unlikely. *Id.* at 183.

Through his evaluation, Mr. Knox found that the scientific research and literature on GSR evidence in 1995 had little to no information regarding the possibility or probability of GSR transfer. *Id.* at 48. Mr. Knox has opined, given the lack of literature concerning GSR transfer, that Ms. Van Gelder's reliance on his experience and empirical evidence was a reasonable scientific basis for his conclusions. *Id.* at 49. That is, the basis for Mr. Van Gelder's conclusions were not so illogical or implausible under the circumstance to support deliberate or reckless falsification. On the contrary, he agrees that, based on his expert review and research of the relevant scientific material, even if Mr. Van Gelder "had done extensive literature research before testifying in 1995, he would not have found any scientific or literature document that would have precluded his testimony." Exhibit A at 180. This information is directly relevant and helpful to a jury evaluating whether Mr. Van Gelder's opinions constituted a "fabrication."

**B. Mr. Burgess Mischaracterizes the Purpose and Substance of Mr. Knox's Opinions.**

Mr. Burgess agrees that Mr. Knox has sufficient qualifications to testify as an expert on GSR evidence, but denies that Mr. Knox has "rel[ied] on his qualifications" to provide an opinion that has a scientific basis. *See* ECF No. 227 at p. 1. Mr. Burgess supports this argument by misrepresenting Mr. Knox's deposition testimony and misconstruing the purpose of his expert opinion. To be clear, Mr. Knox will not offer testimony regarding whether or not Mr. Van Gelder's conclusion and testimony were in fact correct by today's scientific standards - only that there was sufficient basis for his conclusions given the state of science in 1994 and 1995. *See* Exhibit A at 162-63.

First, Mr. Burgess contends that Mr. Knox agrees with Plaintiff's designated experts Wayne Niemeyer and John Kilty. *See* ECF No. 227 at 3. That is patently false and highlights Mr. Burgess's attempt to misconstrue Mr. Knox's opinion in this case. Indeed, Mr. Knox's opinion

on this topic stands in stark contrast to the opinions of Messrs. Niemeyer and Kilty. Mr. Knox devotes eight collective pages in his expert report to rebutting their opinions. *See* Exhibit C at 36-43. In his deposition, he notes that based on his research and interpretations of the literature are the type of interpretations and inferences any criminologist, including Mr. Van Gelder, could have made in 1995. *See* Exhibit A at 196.

Next, Mr. Burgess falsely asserts that Mr. Knox will be providing an opinion that the lack of scientific research and literature on GSR transfer means that the probability of GSR transfer is low. *See* ECF No. 227 at 3-4. Mr. Knox has not been asked to testify whether the probability of GSR transfer in Mr. Burgess's case was, in fact, high or low. He expressly explains, though the explanation is omitted in Plaintiff's motion, that the lack of literature has "nothing to do with the likelihood of transfer" but relates to what a scientist could read, research and consider in forming their opinions. *Id.* at 195-96. Mr. Knox's opinion is limited to the appropriateness of Mr. Van Gelder's conclusions and rationale in 1994 and 1995, based upon the available information. Accordingly, Mr. Knox only evaluates the lack of scientific data and literature on GSR transfer to point out that after relying on his knowledge, skills and ability, and conducting appropriate scientific research, he could not find any literature suggesting Mr. Van Gelder's conclusions or methodology were clearly erroneous, or that any literature would have informed Mr. Van Gelder that consideration of the number of particles evaluating a GSR test for possibility of transfer would be unsupported by science.

Finally, Mr. Burgess laments that, though Mr. Knox is qualified to, he does not give an opinion on whether Mr. Van Gelder's was correct. *See* ECF No. 227 at 3-4. Mr. Burgess claims that this failure demonstrates that Mr. Knox knows that Mr. Van Gelder's conclusion was wrong. *Id.* That is not the case, as this is not the issue before the Court. Accordingly, whether Mr. Van

Gelder was ultimately right or wrong in his trial testimony is not a necessary question to reach to resolve Plaintiff's fabrication claim.

**C. Mr. Knox Properly Considered Mr. Van Gelder's Testimony that Mr. Van Gelder Relied on Test Firing Data to Support His Conclusions Regarding the GSR Evidence.**

To support his opinion that Mr. Van Gelder's conclusions were not clearly erroneous, Mr. Knox relied on Mr. Van Gelder's trial testimony wherein Mr. Van Gelder testified that his GSR conclusions were based upon empirical evidence from analysis that Mr. Van Gelder had conducted in the laboratory. *See* Exhibit C (Knox's Report dated July 28, 2017) at 49. Contrary to Mr. Burgess's portrayal, Mr. Knox did not simply accept Mr. Van Gelder's testimony that he did not fabricate evidence as fact. Instead, Mr. Knox relied on Mr. Van Gelder's testimony that he reviewed test firing data - which Mr. Burgess concedes is "perfectly appropriate" —and provided an opinion based on his specialized experience and knowledge that it is appropriate and an accepted practice for a GSR analyst (such as Mr. Van Gelder) to base his conclusions on his own experience in casework and/or his own data. *See* ECF No. 227, at 9.

Mr. Burgess's argument is completely misguided when you review his own expert's Rebuttal Report. Mr. Niemeyer relies on his own test firing data to support his own opinions:

I also looked at some of my own data from a few test firing projects and calculated bullet fractions as a function of total Pa/Ba/Sb particles (the characteristic GSR particles) with these results:

Total Pb/Ba/Sb particles	Fraction of Pb/Sb + Pb particles
240	0.32
185	0.05
402	0.04
87	0.53
154	0.17
603	0.03
256	0.15

This data also shows that bullet fragments are not found in great abundance on a shooter's hands.

See Exhibit B (Niemeyer August 17, 2017 Rebuttal Report) at 4. Plaintiff's argument that Mr. Knox merely regurgitates Mr. Van Gelder's testimony is inaccurate as Mr. Knox explained the factual basis of his opinion, the methodology he employed in evaluating those facts, and his ultimate opinion. As he explains, given the Baltimore Police Department GSR report at the time, the information Mr. Van Gelder had, and the applicable science available at the time, he would have complete the GSR form in the same manner. Exhibit A at 181. As Defendants previously noted in their summary judgment motion, Mr. Neimeyer gave the same opinion. To suggest that Mr. Knox's opinion is unreliable on this point, when Plaintiff's expert gave the same opinion based on the same facts, belies any basis to exclude Mr. Knox.

WHEREFORE, for the foregoing reasons, the Defendants respectfully request that this Court deny Mr. Burgess's Motion *In Limine* No. 11 to Exclude Opinion Testimony of Michael A. Knox and deny Mr. Burgess's request for a *Daubert* hearing.



Respectfully submitted,

/s/

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Neil E. Duke, Bar No. 14073  
[nduke@bakerdonelson.com](mailto:nduke@bakerdonelson.com)  
Kelly M. Preteroti, Bar No. 28231  
[kmpreteroti@bakerdonelson.com](mailto:kmpreteroti@bakerdonelson.com)  
Christopher C. Dahl, Bar No. 29649  
[cdahl@bakerdonelson.com](mailto:cdahl@bakerdonelson.com)  
Thomas H. Barnard, Bar No. 27488  
[tbarnard@bakerdonelson.com](mailto:tbarnard@bakerdonelson.com)  
Elizabeth J. Cappiello, Bar No. 29185  
[ecappiello@bakerdonelson.com](mailto:ecappiello@bakerdonelson.com)  
BAKER, DONELSON, BEARMAN,  
CALDWELL & BERKOWITZ, PC  
100 Light Street  
Baltimore, Maryland 21202  
(410) 685-1120  
(443) 263-7598 – Fax

*Counsel for Defendants, Gerald Alan  
Goldstein, William Ritz, Dale Weese, Richard  
Purtell, Steven Lehmann, Robert Patton,  
David Neverdon, and Daniel Van Gelder*

/s/

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James H. Fields, Esquire  
[jfields@fieldspeterson.com](mailto:jfields@fieldspeterson.com)  
Fields Peterson, LLC  
Harborplace Tower  
111 South Calvert Street, Suite 1400  
Baltimore, Maryland 21202

*Counsel for Defendants, Kelly Miles, John  
Boyd, John Skinner and Dean Palmere*

**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that on this 27th day of October, 2017, a copy of the foregoing Response to the Motion *In Limine* No. 11 to Exclude Opinion Testimony of Michael A. Knox was served on all counsel of record via the Court's CM/ECF filing system.

/s/

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Christopher C. Dahl